

DOCKET NO.: IBIS0056-100 (IBIS-0312)
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REMARKS/ARGUMENTS

The amendments to the specification have been made to correct typographical errors. Claims 1-8, 10-17, 23-28 and 31-35 are pending. Claims 29, 30, and 36-42 were canceled. Claims 9 and 18-22 were withdrawn from consideration as being drawn to non-elected inventions. Claims 1-3, 17, 23, 31, 34, and 35 stand rejected under 35 U.S.C. § 112. Claims 1, 6, 17, 23, 25, 31, and 33 stand rejected under 35 U.S.C. § 102(b). Claims 1-4, 6, 7, 11-13, 24, 25, 27, 31, and 35 stand rejected under 35 U.S.C. § 102(e). Claims 5, 8, 10, 11-14, 15, 16, 26, 28, 32, and 34 stand rejected under 35 U.S.C. § 103(a). Claims 11-13 were objected to because of informalities; claims 11-13 as well as claim 14 have been amended to overcome the objection. Claims 1 and 31 have been amended to more particularly point out and distinctly claim Applicant's invention. The limitation of Claim 26 was incorporated into amended Claim 1, and thus, Claim 26 has been canceled. Claims 2, 4, 5, 16, 19 and 24 have been amended to correct typographical errors. Upon entry of the present amendment, claims 1-8, 10-17, 23-25, 27-28 and 31-35 will be pending. Support for these amendments can be found in the specification, as filed, on page 5, lines 24-26, which state that "the self-dispensing storage device and/or a self-dispensing plate include(s) a **disposable** storage device and dispensing mechanism" (emphasis added). No new matter has been added.

I. The Claims Are Clear and Definite

Claims 1-3, 17, 23, 31, 34, and 35 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as his invention. Applicant respectfully disagrees with this assertion and requests that the rejections under 35 U.S.C. § 112, second paragraph be withdrawn.

The specification of the original application, as filed, particularly points out, distinctly claims, and adequately describes the invention. With respect to claims 1, 2, and 31, the Office Action asserts that "the storage devices in claims 1 and 2 appear to store samples to be dispensed, such that each well of the plate has a corresponding dispensing mechanism." Applicant agrees

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with this analysis. However, the Office Action goes on to state that "in claim 31, the first storage device contains the liquids to be dispensed into the second storage device. This is confusing. The second storage device cannot possibly have wells each corresponding to a dispensing mechanism." Applicant asserts that the specification, as filed, adequately describes having wells of a second storage device each corresponding to a dispensing mechanism of the first self-dispensing storage device. Firstly, as described on page 25, lines 9-12 of the specification as filed, "The dispensing mechanism and the storage device form a self-dispensing storage device." As further described on page 21, lines 5-17, and shown in Figures 12 and 13 of the drawings, "the sample 6 may be dispensed or transferred to a destination device or another storage device 8" (emphasis added). Specifically in Figure 13 is shown a first self-dispensing storage device, dispensing into a second self-dispensing storage device. Furthermore, a self-dispensing storage device can include multiple wells in a microtiter plate format. Page 23, lines 17-19 of the specification as filed describes a workstation with "stackers, and the source and destination wells could be on 96 well plates, such as shown in Figure 12." For example, on page 3, lines 5-8 of the specification as filed, a "self-dispensing plate" is described in which "the resulting combination of the plurality of wells of the microtiter plate each having its own dispensing mechanism (e.g., one dispensing mechanism per well) ... is in dispensing communication with an opening in the well." Claims 31 and 33 describe the system for transferring samples from "a first self-dispensing storage device" to "a second self-dispensing storage device." Thus, one self-dispensing storage device can dispense into a second self-dispensing storage device, both of which can include multiple wells in a microtiter plate format. In the case of a first self-dispensing plate, each well of the plate has its own dispensing mechanism in dispensing communication with an opening in the well, and these wells can be positioned above the wells of a second self-dispensing storage device that is also in microtiter plate format. Thus, contrary to the Office Action's assertions, the second storage device can have wells each corresponding to a dispensing mechanism of the first storage device. However, solely to advance prosecution of the Application, a portion of the preamble of Claim 31 has been deleted.

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With respect to claim 23, the Office Action asserts that "it is unclear whether the filter is actually disposed between the storage device and dispensing mechanism. From the drawings it appears the filter is within the storage device of which the dispensing mechanism is a part." Applicant submits that this is not a dichotomy. Both rather, a filter can be within the storage device of which the dispensing mechanism is a part, as well as being disposed between the storage device and dispensing mechanism. Page 1, lines 8-10 of the specification describes "the storage device and the dispensing mechanism that form an integral unit with the dispensing mechanism in dispensing communication with the storage device." Therefore, in one embodiment, the filter can be a part of the integral unit comprising a storage device and a dispensing mechanism. On page 5, lines 4-6 of the specification, the self-dispensing system "preferably includes a filter or screen disposed between the storage device and the dispensing mechanism to prevent solids from jamming or clogging the dispensing mechanism." Furthermore, claim 23 describes "a filter disposed between said storage device and said dispensing mechanism." Figure 1 shows one embodiment of the present invention, in which the filter is between the storage device and the dispensing mechanism which are an integral unit. For at least these reasons, Applicant respectfully proposes this claim to be clear and definite.

With respect to claim 34, the Office Action states that "the limitation has been interpreted as the robots can locate themselves and the storage devices, which would be inherent or intrinsic if claim 32 is met by prior art." Applicant agrees with the characterization that the robots of Claim 34 can locate themselves and related storage devices. However, Applicant does not agree that this ability of the robots of Claim 34 would be inherent or intrinsic in any robotic system such as the one referred to in Claim 32. The subject matter of Claim 32 could include robots that are unaware of their own position, whereas the robots of Claim 34 have self-knowledge in which each robot knows where it is with respect to other components of the system and are capable of self-positioning in relation thereto. Applicants respectfully propose that claim 34 is clear and definite and well supported by sufficient teaching within the specification.

Also with respect to Claim 34, the Office Action further asks "Do the robots dispense, too?" Applicant again refers to Claim 34 to point out that the "positioning and transferring

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features for locating said robots and said onboard self-dispensing storage devices" are ultimately oriented to the purpose of dispensing but the robots themselves are not dispensing. Furthermore, on page 6, lines 29-30 of the specification, a "robot carrying a single self-dispensing storage device of the present invention in an automated system" is described. Thus, the robot carries and serves to position the self-dispensing system, but does not, itself, dispense. Similarly, page 9, lines 18-20 of the specification describe that a "dispensing mechanism 3, is moved about by, for example, a robot in a robotic system . . ." Thus, the robot moves the dispensing mechanism, but the dispensing mechanism performs the dispensing.

Finally, the Office Action alleges that claim 35 "provides for the uses of the self-dispensing devices... without setting forth any steps involved in the process" and thus is not a proper process claim. With this amendment, Applicant has requested that Claim 35 be canceled, thus rendering this rejection moot.

In view of the foregoing, Applicant asserts that the specification fully discloses the claimed invention, and that one of ordinary skill in the art would understand what is described by the claimed invention and how to carry it out. Accordingly, Applicant respectfully requests that the rejections under 35 U.S.C. § 112, second paragraph be withdrawn.

II. Rejections under 35 U.S.C § 102(b)

Claims 1, 6, 17, 23, 25, 31, and 33 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,461,328 to Kenney, hereinafter referred to as "Kenney."

Applicant respectfully disagrees and requests that the rejections under 35 U.S.C. § 102 (b) be withdrawn according to the claims as amended and the following arguments.

Claim 1 of the instant application has been amended to state that "the self-dispensing storage device and/or a self-dispensing plate include a disposable storage device and dispensing mechanism." Kenney does not disclose a disposable self-dispensing system. Furthermore, in contrast, the Office Action cites Column 2, lines 50-55 of Kenney as disclosing the driving mechanism, which consists of a "Hose 38 ... used to apply mouth suction or pressure or may be connected to a

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conventional vacuum-pressure device such as the one typically used with pipetting devices described below." Thus, the driving mechanism of the invention of Kenney is external to the sample storage device. Furthermore, nowhere does Kenney describe a driving mechanism that is "...electrical, or electro-magnetically actuated." However, the present invention claims a self-dispensing system including an internal driving mechanism, which is provided to be a physical, mechanical or electromagnetic mechanism; this fact is further illustrated in Figures 1 and 9A, in which the driving mechanism of the dispensing mechanism is an integral part of the self-dispensing sample container, and is shown to be a physical structure or apparatus, not merely an external force as disclosed in Kenney. Applicant respectfully asserts that Kenney fails to disclose each and every element of the claim, as amended, and does not support a 35 U.S.C. § 102(b) rejection.

With regard to Claims 31 and 33, the Office Action states that "Kenney discloses a self-dispensing system for transferring samples from one self-dispensing storage device (3) to another self-dispensing storage device (8) or a workstation...." However, the Office Action mischaracterizes Kenney: First, the Office Action refers to "FIGS. 4, 4a; COL. 14, lines 21-38," but there is no Figure 4a, nor Column 14 in Kenney. Second, in the invention of Kenney, the second storage device that receives the sample is not, itself, a self-dispensing storage device; there are no openings in the second storage device receiving the dispensed sample to allow the second device to act as a self-dispensing device. Claim 31 of the instant application clearly recites (in part) "A self-dispensing system for transferring samples from one self-dispensing storage device to another self-dispensing storage device or a workstation..." and it is clear that first and second self-dispensing storage devices are essential elements of Claim 31. Because Claim 33 depends from 31, it includes the same limitations as Claim 31, and therefore also requires the limitation of first and second self-dispensing storage devices.

Therefore, Kenney does not disclose each and every limitation of Claims 1, 6, 17, 23, 25, 31, and 33. Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(b).

III. Rejections under 35 U.S.C. § 102(e)

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Claims 1-4, 6, 7, 11-13, 24, 25, 27, 31, and 35 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,083,763 to Balch, hereinafter referred to as "Balch." Applicant respectfully disagrees and requests that the rejections under 35 U.S.C. § 102 (e) be withdrawn.

Balch is directed to "an array of depositors" (Column 9, lines 61-62) which are not equivalent to the dispensing mechanism of the instant invention. As disclosed in Column 14, lines 31-33 of Balch, "For microarrays containing more probe elements, multiple printing solution reservoirs or storage vessels can be interfaced to a single print head." However, Applicant's invention requires a one-to-one correspondence between storage device and dispensing mechanism. In the instant invention, "Each well in the self-dispensing plate has a dispensing mechanism formed integral with it and arranged in dispensing communication with it" (page 10, lines 9-11 of the specification) and the wells of this self-dispensing plate are shown to be aligned in a one-to-one correspondence with openings in the multiple reservoirs of the storage device receiving the sample. In contrast, Balch provides that each of the depositors in an array of depositors does not have a one-to-one relationship with each of the multiple reservoirs with which it is in dispensing communication. Furthermore, with respect to Claims 31 and 35, the Office Action again mischaracterizes the storage device of Balch as being "self-dispensing" when in fact no opening or means of dispensing is provided for the second storage device.

Therefore, Applicant asserts that each and every element of the claims is not disclosed by Balch, and respectfully requests reconsideration and withdrawal of the 35 U.S.C § 102(e) rejection.

IV. The Claims Are Unobvious

Claims 5, 8, 11-14, 28, 32 and 34 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,083,763 to Balch. Claims 10, 15, 16 and 26 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,083,763 to Balch in view of WO 98/04358 to Tisone, *et al.*, hereinafter referred to as "Tisone." Applicant respectfully disagrees with these rejections and requests reconsideration and withdrawal of the rejections under 35 U.S.C

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§ 103(a).

The Office has not established a *prima facie* case for obviousness of Claims 5, 8, 11-14, 28, 32 and 34 or for Claims 10, 15, 16 and 26. In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must disclose, teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a primary reference or to combine reference teachings. Third, there must be a reasonable expectation of success that the suggested combination will work.

Firstly, the cited references do not disclose, teach or suggest all the limitations of the pending claims. As amended, the claims recite (in relevant part) "A self-dispensing system for dispensing a measured quantity or volume of a sample comprising: one or more disposable storage devices for holding a sample to be dispensed..." Thus, as argued above, one of the limitations of Claims 5, 8, 11-14 and 28 is "one or more disposable storage devices," and Balch does not disclose, teach or even suggest disposable storage devices. Moreover, there is no additional disclosure in Balch to cure this omission, thereby precluding a *prima facie* rejection. The Office has not, therefore, established a *prima facie* case of obviousness. Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection.

Claims 32 and 34 were rejected under 35 U.S.C. § 103(a) as being obvious over Balch. The reaction vessel of Balch is not a self-dispensing storage device. Additionally, claim 34 further requires "autonomous positioning and transferring features for locating said robots and said onboard self-dispensing storage devices with respect to one another and for dispensing said measured volume of said sample." Such self-knowledge and self-positioning robots are not disclosed in Balch. Thus, Balch does not teach, disclose or even suggest all the limitations of Claims 32 and 34, and does not support a 35 U.S.C. § 103(a) rejection.

Lastly, Claims 10, 15, 16 and 26 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,083,763 to Balch in view of WO 98/04358 to Tisone. Claim 26 has been canceled, thus rendering the rejection of Claim 26 moot.

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Claims 10, 15 and 16 also require the inclusion of "one or more disposable storage devices" and "wherein said sample passes through a filter". Balch does not teach, disclose or suggest the concepts of disposability, nor follow-through filtration of the sample. The Tisone reference is unable to cure this defect. Thereby, the combined reference fail to disclose each element of the claims, as amended. Applicants respectfully request that these rejections under Claims 35 U.S.C. §103 be withdrawn.

Furthermore, the inventions of Balch and Tisone involve multiple steps in which the sample is first siphoned out of a storage device and is then dispensed in a subsequent step. Applicant's invention is a self-dispensing storage device which does not require the prior siphoning step recited in the references.

Moreover, the Office Action admits that "Balch does not disclose a positive displacement type of dispensing mechanism with inlet and outlet valves, actuators with suction and discharge stroke, and the driving mechanism internal to the dispensing mechanism." The Office Action goes on to allege that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Balch to provide a positive displacement type of dispensing mechanism with inlet and outlet valves, actuators with suction and discharge stroke, and the driving mechanism internal to the dispensing mechanism as in Tisone et al. to precisely dispense..." No motivation to modify or combine the cited references has been provided. Additionally, even if one were to try to combine the apparatus of Balch with the internal driving mechanism as in Tisone, one would not form a functional device. The apparatus of Balch employs capillary tubes, and one cannot put the drive mechanism internal to the dispensing mechanism as in Tisone into a capillary tube to form a working invention.

In establishing a *prima facie* case of obviousness under 35 U.S.C. §103, it is further incumbent upon the Office to provide a reason why one of ordinary skill in the art would have been led to modify a reference or to combine reference teachings to arrive at the claimed invention. *Ex parte Clapp*, 227 U.S.P.Q. 972 (Bd. Pat. App. Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge

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generally available to one of ordinary skill in the art and not from Applicant's disclosure, see for example, *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988); and *Ex parte Nesbit*, 25 U.S.P.Q.2d 1817, 1819 (Bd. Pat. App. Int. 1992). In this respect, the following quotation from *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1302 (Pat. Off. Bd. App. 1993), is noteworthy:

Our reviewing courts have often advised the Patent and Trademark Office that it can satisfy the burden of establishing a *prima facie* case of obviousness only by showing some objective teaching in either the prior art, or knowledge generally available to one of ordinary skill in the art, that "would lead" that individual "to combine the relevant teachings of the references." ... Accordingly, an examiner cannot establish obviousness by locating references which describe various aspects of a patent applicant's invention without also providing evidence of the motivating force that would impel one skilled in the art to do what the patent applicant has done.

(citations omitted; emphasis added).

Since the Office has not shown that Balch, alone or in combination with Tisone, discloses, teaches or suggests the limitations of neither Claims 5, 8, 11-14, 28, 32 and 34 nor Claims 10, 15 and 16, nor has the Office provided any motivating force that would impel one of skill in the art to combine the references as proposed. Moreover, the proposed combination would not result in a functional device. Applicant respectfully submits that the Office has not established a *prima facie* case of obviousness for these Claims. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a).

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V. Conclusion

In view of the foregoing, Applicant respectfully submits that the claims are in condition for allowance. An early notice of the same is earnestly solicited. The Examiner is invited to contact Applicant's undersigned representative at (619) 685-1708 if there are any questions regarding Applicant's claimed invention.

Respectfully submitted,



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Enclosure

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